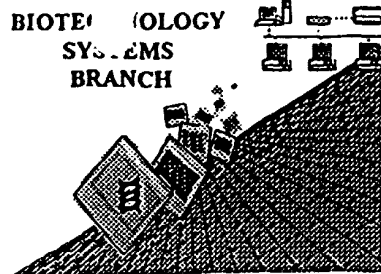


A. Rebert

RAW SEQUENCE LISTING **ERROR REPORT**



#12

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 09/445,480

Source: OIPE

Date Processed by STIC: 9/25/2001

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,**
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY**

FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.

PATENTIN 2.1 e-mail help: patin21help@uspto.gov or phone 703-306-4119 (R. Wax)

PATENTIN 3.0 e-mail help: patin3help@uspto.gov or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 3.0 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW:

Checker Version 3.0

The Checker Version 3.0 application is a state-of-the-art Windows based software program employing a logical and intuitive user-interface to check whether a sequence listing is in compliance with format and content rules. Checker Version 3.0 works for sequence listings generated for the original version of 37 CFR §§1.821 - 1.825 effective October 1, 1990 (old rules) and the revised version (new rules) effective July 1, 1998 as well as World Intellectual Property Organization (WIPO) Standard ST.25.

Checker Version 3.0 replaces the previous DOS-based version of Checker, and is Y2K-compliant. Checker allows public users to check sequence listings in Computer Readable form (CRF) before submitting them to the United States Patent and Trademark Office (USPTO). Use of Checker prior to filing the sequence listing is expected to result in fewer errored sequence listings, thus saving time and money.

Checker Version 3.0 can be down loaded from the USPTO website at the following address:

<http://www.uspto.gov/web/offices/pac/checker>

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/445,480

DATE: 09/25/2001
TIME: 04:28:44

INPUT SET: S36623.raw

Does Not Comply
Corrected Diskette Needed

This Raw Listing contains the General
Information Section and up to the first 5 pages.

SEQUENCE LISTING

(1) General Information:

(i) APPLICANT:

(A) NAME: DLO-Center for Plant Breeding and
Reproduction Research

(B) STREET: ~~Droevendaalsesteeg 1~~

(C) CITY: ~~Wageningen~~

(E) COUNTRY: The Netherlands

(F) POSTAL CODE (ZIP): ~~6708~~ PB

(G) TELEPHONE: ~~+31 317 477001~~

(H) TELEFAX: ~~+31 317 418094~~

(I) TELEX: -

(ii) TITLE OF INVENTION: A method for plant protection against insects
or nematodes

(iii) NUMBER OF SEQUENCES: 4

~~(iv)~~ COMPUTER READABLE FORM:

(v) (A) MEDIUM TYPE: Floppy disk

(B) COMPUTER: IBM PC compatible

(C) OPERATING SYSTEM: PC-DOS/MS-DOS

(D) SOFTWARE: PatentIn Release #1.0, Version #1.30 (EPO)

(v) CURRENT APPLICATION DATA:

APPLICATION NUMBER: PCT/NL98/00352

(2) INFORMATION FOR SEQ ID NO: 1:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 888 base pairs

(B) TYPE: nucleic acid

(C) STRANDEDNESS: double

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Actinia equina

Format:

← Surname comma
OTHER NAMES.

* See sample in Sequence
Rules provided.

Remove
→

← Insert (iv) CORRESPONDENCE ADDRESS

* See format in Sequence
Rules provided.

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/445,480DATE: 09/25/2001
TIME: 04:28:45

INPUT SET: S36623.raw

47 (ix) FEATURE:
48 (A) NAME/KEY: mat_peptide
49 (B) LOCATION:99..695
50
51 (ix) FEATURE:
52 (A) NAME/KEY: CDS
53 (B) LOCATION:3..695
54
55 (ix) FEATURE:
56 (A) NAME/KEY: sig_peptide
57 (B) LOCATION:3..98
58
59 (ix) FEATURE:
60 (A) NAME/KEY: 5'UTR
61 (B) LOCATION:1..2
62
63 (ix) FEATURE:
64 (A) NAME/KEY: 3'UTR
65 (B) LOCATION:696..888
66
67 (x) PUBLICATION INFORMATION:
68 (A) AUTHORS: Gruden, Kristina
69 Strukelj, Borut
70 Popovic, Tatjana
71 Lenarcic, Brigita
72 Bevec, Tadeja
73 Brzin, Joze
74 Kregar, Igor
75 Herzog-Velikonja, Jana
76 Stiekema, Willem J
77 Bosch, Dirk
78 (B) TITLE: The cysteine protease activity of Colorado
79 potato beetle (*Leptinotarsa decemlineata*) guts,
80 which is insensitive to potato protease
81 inhibitors, is inhibited by thyroglobulin type-1
82 domain inhibitors
83 (C) JOURNAL: Insect Biochem. Mol. Biol
84 (D) VOLUME: 28
85 (F) PAGES: 549-560
86 (G) DATE: 1998
87
88 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:
89
90 CT ATG GCT CTT AGC CAA AAC CAA GCC AAG TTT TCC AAA GGA TTC GTC 47
91 Met Ala Leu Ser Gln Asn Gln Ala Lys Phe Ser Lys Gly Phe Val
92 -32 -30 -25 -20
93
94 GTG ATG ATT TGG GTA CTA TTC ATT GCT TGT GCT ATA ACT TCA ACT GAA 95
95 Val Met Ile Trp Val Leu Phe Ile Ala Cys Ala Ile Thr Ser Thr Glu
96 -15 -10 -5
97
98 GCT AGT CTA ACC AAA TGC CAA CAG CTC CAG GCC TCG GCT AAC AGT GGT 143
99 Ala Ser Leu Thr Lys Cys Gln Gln Leu Gln Ala Ser Ala Asn Ser Gly

RAW SEQUENCE LISTING PATENT APPLICATION US/09/445,480

DATE: 09/25/2001
TIME: 04:28:45

INPUT SET: S36623.raw

| | 1 | 5 | 10 | 15 | |
|-----|---|-----|-----|-----|-----|
| 100 | | | | | |
| 101 | | | | | |
| 102 | CTG ATA GGT ACT TAT GTA CCA CAA TGC AAA GAA ACG GGA GAG TTC GAA | | | | 191 |
| 103 | Leu Ile Gly Thr Tyr Val Pro Gln Cys Lys Glu Thr Gly Glu Phe Glu | | | | |
| 104 | | 20 | 25 | 30 | |
| 105 | | | | | |
| 106 | GAA AAA CAA TGC TGG GGA TCG ACT GGT TAC TGT TGG TGT GTG GAT GAA | | | | 239 |
| 107 | Glu Lys Gln Cys Trp Gly Ser Thr Gly Tyr Cys Trp Cys Val Asp Glu | | | | |
| 108 | | 35 | 40 | 45 | |
| 109 | | | | | |
| 110 | GAT GGA AAA GAG ATT CTA GGA ACC AAG ATC CGT GGA TCT CCG GAT TGC | | | | 287 |
| 111 | Asp Gly Lys Glu Ile Leu Gly Thr Lys Ile Arg Gly Ser Pro Asp Cys | | | | |
| 112 | | 50 | 55 | 60 | |
| 113 | | | | | |
| 114 | AGC CGC AGA AAA GCC GCG TTA ACA CTT TGC CAG ATG ATG CAA GCC ATC | | | | 335 |
| 115 | Ser Arg Arg Lys Ala Ala Leu Thr Leu Cys Gln Met Met Gln Ala Ile | | | | |
| 116 | | 65 | 70 | 75 | |
| 117 | | | | | |
| 118 | ATT GTT AAT GTC CCT GGT TGG TGT GGC CCT CCA TCG TGT AAA GCT GAC | | | | 383 |
| 119 | Ile Val Asn Val Pro Gly Trp Cys Gly Pro Pro Ser Cys Lys Ala Asp | | | | |
| 120 | | 80 | 85 | 90 | 95 |
| 121 | | | | | |
| 122 | GGC AGT TTT GAC GAG GTT CAG TGC TGC GCA AGT AAT GGA GAA TGC TAC | | | | 431 |
| 123 | Gly Ser Phe Asp Glu Val Gln Cys Cys Ala Ser Asn Gly Glu Cys Tyr | | | | |
| 124 | | 100 | 105 | 110 | |
| 125 | | | | | |
| 126 | TGT GTG GAT AAG AAA GGA AAA GAA CTT GAA GGC ACA AGA CAA CAG GGA | | | | 479 |
| 127 | Cys Val Asp Lys Lys Gly Lys Glu Leu Glu Gly Thr Arg Gln Gln Gly | | | | |
| 128 | | 115 | 120 | 125 | |
| 129 | | | | | |
| 130 | AGG CCA ACC TGC GAA AGA CAC CTA AGC GAA TGC GAG GAA GCT CGA ATC | | | | 527 |
| 131 | Arg Pro Thr Cys Glu Arg His Leu Ser Glu Cys Glu Glu Ala Arg Ile | | | | |
| 132 | | 130 | 135 | 140 | |
| 133 | | | | | |
| 134 | AAG GCG CAT TCA AAC AGT CTT CGT GTT GAG ATG TTC GTG CCA GAG TGT | | | | 575 |
| 135 | Lys Ala His Ser Asn Ser Leu Arg Val Glu Met Phe Val Pro Glu Cys | | | | |
| 136 | | 145 | 150 | 155 | |
| 137 | | | | | |
| 138 | TTA GAA GAT GGA TCA TAT AAC CCA GTA CAG TGC TGG CCT AGC ACA GGA | | | | 623 |
| 139 | Leu Glu Asp Gly Ser Tyr Asn Pro Val Gln Cys Trp Pro Ser Thr Gly | | | | |
| 140 | | 160 | 165 | 170 | 175 |
| 141 | | | | | |
| 142 | TAC TGT TGG TGC GTC GAT GAA GGA GGG GTA AAG GTA CCA GGT TCC GAT | | | | 671 |
| 143 | Tyr Cys Trp Cys Val Asp Glu Gly Gly Val Lys Val Pro Gly Ser Asp | | | | |
| 144 | | 180 | 185 | 190 | |
| 145 | | | | | |
| 146 | GTC AGA TTT AAA CGC CCC ACA TGC TAAGAAAAAC ACAGTGAACA AAGTGGCTAG | | | | 725 |
| 147 | Val Arg Phe Lys Arg Pro Thr Cys | | | | |
| 148 | | 195 | | | |
| 149 | | | | | |
| 150 | TTTCCAGATC GAAATAACT ACAAGGATT AATAAAATGT TAAAATAATT TCTCAATTCG | | | | 785 |
| 151 | | | | | |
| 152 | GCTGTGATAT ATTTTTTCCA AGATAATTTA ATCTGCATGT AGTTAACAGA AAACAATCTC | | | | 845 |

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/445,480DATE: 09/25/2001
TIME: 04:28:45

INPUT SET: S36623.raw

153
154 AACTAGAAAT AAAGACTACG GTAATAATGA CAAAAAAAAA AAA 888
155
156
157 (2) INFORMATION FOR SEQ ID NO: 2:
158
159 (i) SEQUENCE CHARACTERISTICS:
160 (A) LENGTH: 231 amino acids
161 (B) TYPE: amino acid
162 (D) TOPOLOGY: linear
163
164 (ii) MOLECULE TYPE: protein
165 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:
166
167 Met Ala Leu Ser Gln Asn Gln Ala Lys Phe Ser Lys Gly Phe Val Val
168 -32 -30 -25 -20
169
170 Met Ile Trp Val Leu Phe Ile Ala Cys Ala Ile Thr Ser Thr Glu Ala
171 -15 -10 -5
172
173 Ser Leu Thr Lys Cys Gln Gln Leu Gln Ala Ser Ala Asn Ser Gly Leu
174 1 5 10 15
175
176 Ile Gly Thr Tyr Val Pro Gln Cys Lys Glu Thr Gly Glu Phe Glu Glu
177 20 25 30
178
179 Lys Gln Cys Trp Gly Ser Thr Gly Tyr Cys Trp Cys Val Asp Glu Asp
180 35 40 45
181
182 Gly Lys Glu Ile Leu Gly Thr Lys Ile Arg Gly Ser Pro Asp Cys Ser
183 50 55 60
184
185 Arg Arg Lys Ala Ala Leu Thr Leu Cys Gln Met Met Gln Ala Ile Ile
186 65 70 75 80
187
188 Val Asn Val Pro Gly Trp Cys Gly Pro Pro Ser Cys Lys Ala Asp Gly
189 85 90 95
190
191 Ser Phe Asp Glu Val Gln Cys Cys Ala Ser Asn Gly Glu Cys Tyr Cys
192 100 105 110
193
194 Val Asp Lys Lys Gly Lys Glu Leu Glu Gly Thr Arg Gln Gln Gly Arg
195 115 120 125
196
197 Pro Thr Cys Glu Arg His Leu Ser Glu Cys Glu Glu Ala Arg Ile Lys
198 130 135 140
199
200 Ala His Ser Asn Ser Leu Arg Val Glu Met Phe Val Pro Glu Cys Leu
201 145 150 155 160
202
203 Glu Asp Gly Ser Tyr Asn Pro Val Gln Cys Trp Pro Ser Thr Gly Tyr
204 165 170 175
205

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/445,480DATE: 09/25/2001
TIME: 04:28:46

INPUT SET: S36623.raw

206 Cys Trp Cys Val Asp Glu Gly Gly Val Lys Val Pro Gly Ser Asp Val
207 180 185 190

208
209 Arg Phe Lys Arg Pro Thr Cys
210 195

211
212 (2) INFORMATION FOR SEQ ID NO: 3:
213

214 (i) SEQUENCE CHARACTERISTICS:
215 (A) LENGTH: 696 base pairs
216 (B) TYPE: nucleic acid
217 (C) STRANDEDNESS: double
218 (D) TOPOLOGY: linear
219

220 (ii) MOLECULE TYPE: cDNA
221

222 (iii) HYPOTHETICAL: NO
223

224 (iv) ANTI-SENSE: NO
225

226 (vi) ORIGINAL SOURCE:
227 (A) ORGANISM: Actinia equina
228

229 (vii) IMMEDIATE SOURCE:
230 (B) CLONE: optimized gene for expression in plants
231

232 (ix) FEATURE:
233 (A) NAME/KEY: CDS
234 (B) LOCATION:1..693
235

236 (ix) FEATURE:
237 (A) NAME/KEY: mat_peptide
238 (B) LOCATION:97..693
239

240 (ix) FEATURE:
241 (A) NAME/KEY: sig_peptide
242 (B) LOCATION:1..693
243

244
245 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:
246

247 ATG GCT CTT AGC CAG AAC CAG GCC AAG TTT TCC AAG GGA TTC GTC GTG 48
248 Met Ala Leu Ser Gln Asn Gln Ala Lys Phe Ser Lys Gly Phe Val Val
249 -32 -30 -25 -20

250
251 ATG ATT TGG GTA CTA TTC ATT GCT TGT GCT ATC ACT TCA ACT GAA GCT 96
252 Met Ile Trp Val Leu Phe Ile Ala Cys Ala Ile Thr Ser Thr Glu Ala
253 -15 -10 -5

254
255 AGT CTA ACG AAA TGC CAA CAG CTG CAG GCC TCG GCT AAC AGT GGT CTG 144
256 Ser Leu Thr Lys Cys Gln Gln Leu Gln Ala Ser Ala Asn Ser Gly Leu
257 1 5 10 15

258

SEQUENCE VERIFICATION REPORT
PATENT APPLICATION US/09/445,480DATE: 09/25/2001
TIME: 04:28:46**INPUT SET: S36623.raw**

| Line | Error | Original Text |
|------|---------------------------------|---|
| 5 | Mandatory Value Not Present | (i) APPLICANT: |
| 6 | Unknown or Misplaced Identifier | (A) NAME: DLO-Center for Plant Breeding and |
| 8 | Unknown or Misplaced Identifier | (B) STREET: Droevendaalsesteeg 1 |
| 9 | Unknown or Misplaced Identifier | (C) CITY: Wageningen |
| 10 | Unknown or Misplaced Identifier | (E) COUNTRY: The Netherlands |
| 11 | Unknown or Misplaced Identifier | (F) POSTAL CODE (ZIP): 6708 PB |
| 12 | Unknown or Misplaced Identifier | (G) TELEPHONE: +31 317 477001 |
| 13 | Unknown or Misplaced Identifier | (H) TELEFAX: +31 317 418094 |
| 14 | Unknown or Misplaced Identifier | (I) TELEX: - |

PAGE: 1

SEQUENCE MISSING ITEM REPORT
PATENT APPLICATION US/09/445,480

DATE: 09/25/2001
TIME: 04:28:46

INPUT SET: S36623.raw

ADDRESSEE
STREET
CITY
STATE
COUNTRY
ZIP
CORRESPONDENCE ADDRESS
APPLICATION NUMBER
FILING DATE
CLASSIFICATION
APPLICATION NUMBER
FILING DATE
PRIOR APPLICATION DATA

PAGE: 1

SEQUENCE CORRECTION REPORT
PATENT APPLICATION US/09/445,480

DATE: 09/25/2001
TIME: 04:28:46

INPUT SET: S36623.raw

Line

Original Text

Corrected Text